TRDF

MEMORANDUM

TECH MEMO: TM-EC-35 DATE: December 29, 1989
AUTHORS: J.L. Groeger and G.E. Elkins FILE: P1-SPS-31
DISTRIBUTION: Doug Frith, John Miller, Amir Hanna, Bill Hadley
SUBJECT: California and Arizona Drilling, Sampling and Testing Plan for SPS-5 Projects

We have revised the SPS-5 materials sampling plans you submitted for California and Arizona. Your plans were very good. The plan we present here represents the most current thinking on these materials and sampling requirements for SPS-5. In January or February we should release a document on guidelines for development of site specific materials sampling and testing plans for SPS-5. These plans have not yet been finalized, however, they can be used as a basis for the sampling you need to do in January.

SPS-5 CALIFORNIA

Enclosed is our proposed drilling and sampling plan for the SPS-5 California site. This plan is based on the enclosed tentative laboratory testing plan. This testing plan controlled our analysis of the field sampling layout and it is formulated to maximize the amount of data collected for a minimum of drilling and sampling work.

For the most part, we decreased the number of cement treated base cores needed and moved the test pit locations more to the interior of the test site. This configuration may better characterize the pavement structure of this SPS test site.

In most cases, the sampling locations were moved from near the end of a test section (40 feet) to a more centrally located position in the transition between sections. The procedure generally followed in this case was to place the A-type sampling location (6" auger) near the middle of the transition zone and place any remaining sampling locations upstream of the A-type sample. This was done to minimize the dynamic effects to the downstream test section. You may need to adjust the positions somewhat in the field due to other considerations not known to us.

6811 Kenilworth Ave., Suite 230 • Riverdale, Maryland 20737 • (301) 779-2505 • FAX 1-301-779-2507

Only two, as opposed to three, BA-type sampling locations were incorporated in sampling locations S1, S6 and S10. This was done because the unbound subbase is 14" thick on this site and the two BA-type boreholes should yield the required bulk sample weight. Usually though, three BA-type boreholes are used at a single sampling location to obtain sufficient quantities of materials.

The CALTRANS sections may be sampled by either adapting our proposed sampling plan or the original plan which you submitted.

SPS-5 ARIZONA

Also enclosed, you will find our proposed drilling and sampling plan for the SPS-5 site in Arizona. Again, the tentative laboratory testing plan is attached. We based this sampling plan on pretty much the same rationale used for the SPS-5 site in California.

In the future, please submit at least a copy of the as-built plan and profile sheets with the test section locations indicated. This will help us better understand the positioning of the test sections and restraints on the sampling plans.

Please call us if you have any questions about these sampling plans. Have a Happy New Year.

JG/jag
Attachments: As listed above

SPS 5 - CALIFORNIA

DRILLING, SAMPLING AND LABORATORY TESTING PLAN

TENTATIVE LABORATORY TESTING PLAN - SPS-5 CALIFORNIA

SAMPLING AREA S1

AC Surface Layer

A1 - AC01, AC02, AC03
BA2 - AC04, AG01, AG02, AG03, AG04, AE01, AE04, AE05, AE06
C1 - AC01, AC05

Bound Base

C1 - TB01, TB02

Unbound Subbase

BA1 & BA2 - UG01, UG02, and UG03, UG04 if appropriate; UG05, UG07, UG08, UG09, UG10

Subgrade

A1 - SS07, SS08, SS10
BA1 & BA2 - SS01, SS02, SS03, SS04, SS05, SS09

SAMPLING AREA S2

AC Surface

A2 - AC01, AC02, AC03
C2 - AC01

Bound Base

C2 - TB01, TB02

Unbound Subbase

None

Subgrade

A2 - SS07, SS08, SS10

SAMPLING AREA S3

AC Surface

A3 - AC01, AC02, AC03
C3 - AC01, AC05
C4 - AC01, AC05
C5 - AC01, AC07
C6 - AC01, AC06
C7 - AC01, AC06
C8 - AC01, AC06
C9 - AC01, AC07
C10 - AC01, AC07
C11 - AC01, AC07
TP1 - AC04, AG01, AG02, AG03, AG04, AE01, AE04, AE05, AE06

Bound Base

C9 - TB01, TB02
C5 - TB01, TB02

Unbound Granular Subbase

TP1 - UG01, UG02, UG03, UG04, UG05, UG07, UG08, UG09, UG10

Subgrade

A3 - SS07, SS08, SS10
TP1 - SS01, SS02, SS03, SS04, SS05, SS09

SAMPLING AREA S4

AC Surface

A4 - AC01, AC02, AC03
C12 - AC01

Bound Base

C12 - TB01, TB02

Unbound Subbase

None

Subgrade

A4 - SS07, SS08, SS10

SAMPLING AREA S5

AC Surface

A5 - AC01, AC02, AC03
C13 - AC01

Bound Base

C13 - TB01, TB02

Unbound Subbase

None

Subgrade

A5 - SS07, SS08, SS10

SAMPLING AREA S6

AC Surface

A6 - AC01, AC02, AC03
BA4 - AC04, AG01, AG02, AG03, AG04, AE01, AE04, AE05, AE06
C14 - AC01

Bound Base

C14 - TB01, TB02

Unbound Subbase

BA3 & BA4 - UG01, UG02 and UG03, UG04 if appropriate; UG05, UG07, UG08, UG09, UG10

Subgrade

A6 - SS07, SS08, SS10
BA3 & BA4 - SS01, SS02, SS03, SS04, SS05, SS09

SAMPLING AREA S7

AC Surface

A7 - AC01, AC02, AC03
C15 - AC01

Bound Base

C15 - TB01, TB02

Unbound Subbase

None

Subgrade

A7 - SS07, SS08, SS10

SAMPLING AREA S8

AC Surface

A8 - AC01, AC02, AC03
C16 - AC01, AC05
C17 - AC01, AC05
C18 - AC01, AC07
C19 - AC01, AC06
C20 - AC01, AC06
C21 - AC01, AC06
C22 - AC01, AC07
C23 - AC01, AC07
C24 - AC01, AC07
TP2 - AC04, AG01, AG02, AG03, AG04, AE01, AE04, AE05, AE06

Bound Base

C18 - TB01, TB02
C22 - TB01, TB02

Unbound Base

TP2 - UG01, UG02, UG03, UG04, UG05, UG07, UG08, UG09, UG10

Subgrade

A8 - SS07, SS08, SS10
TP2 - SS01, SS02, SS03, SS04, SS05, SS09

SAMPLING AREA S9

AC Surface

A9 - AC01, AC02, AC03
C25 - AC01

Bound Base

C25 - TB01, TB02

Unbound Subbase

None

Subgrade

A9 - SS07, SS08, SS10

SAMPLING AREA S10

AC Surface

A10 - AC01, AC02, AC03
BA6 - AC04, AG01, AG02, AG03, AG04, AE01, AE04, AE05, AE06
C26 - AC01, AC05

Bound Base

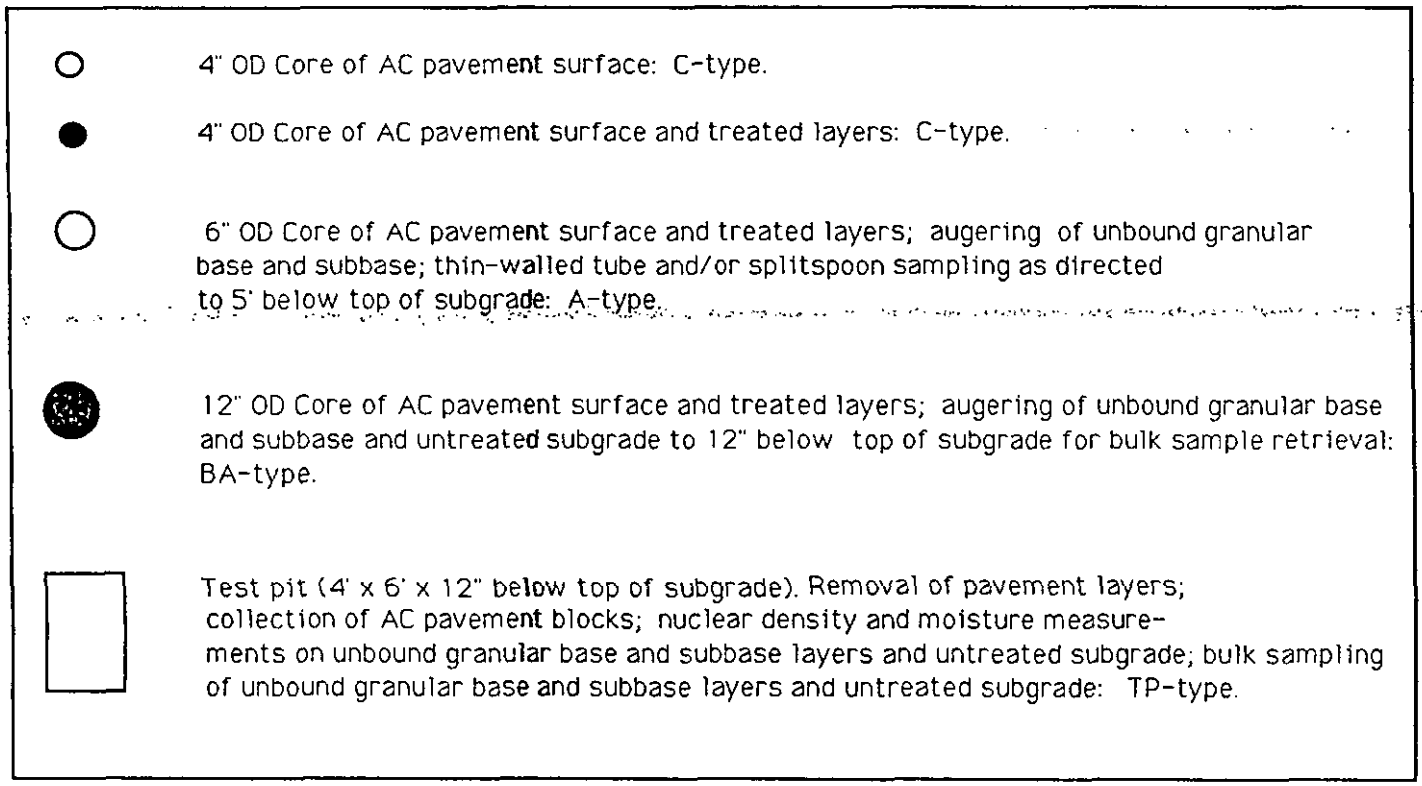
C26 - TB01, TB02

Unbound Subbase

BA5 & BA6 - UG01, UG02 and UG03, UG04 if appropriate; UG05, UG07, UG08, UG09, UG10

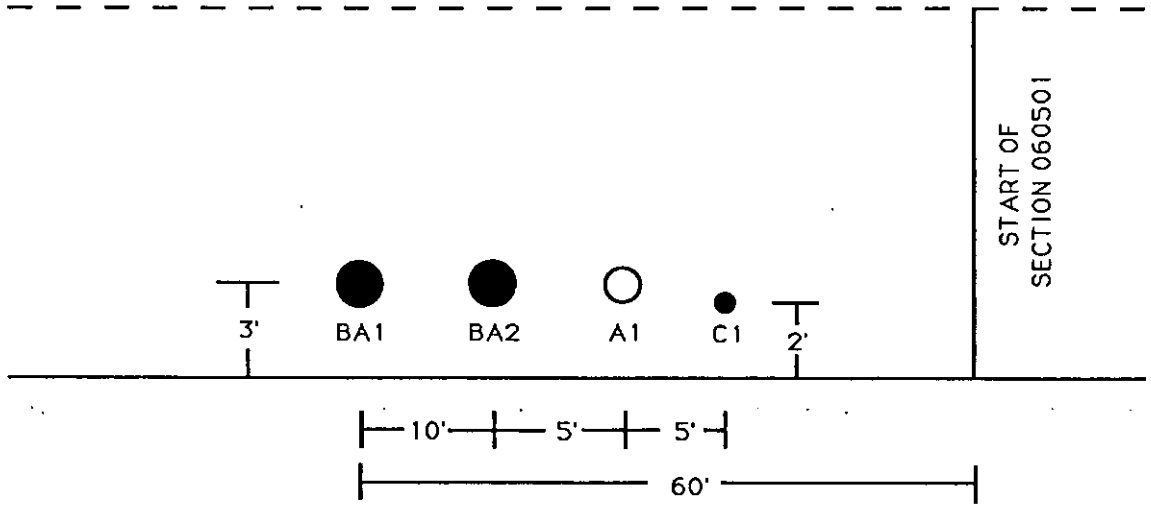
Subgrade

A10 - SS07, SS08, SS10
BA5 & BA6 - SS01, SS02, SS03, SS04, SS05, SS09

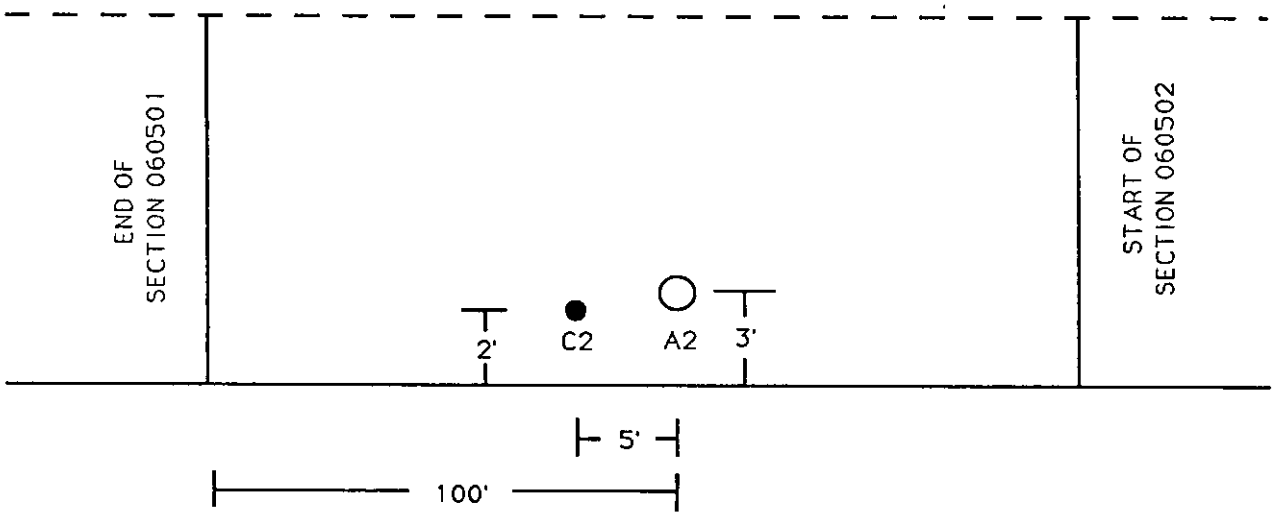


SUMMARY OF SAMPLING LOCATION TYPES - CALIFORNIA

NOT TO SCALE



SAMPLE AREA S1



SAMPLE AREA S2

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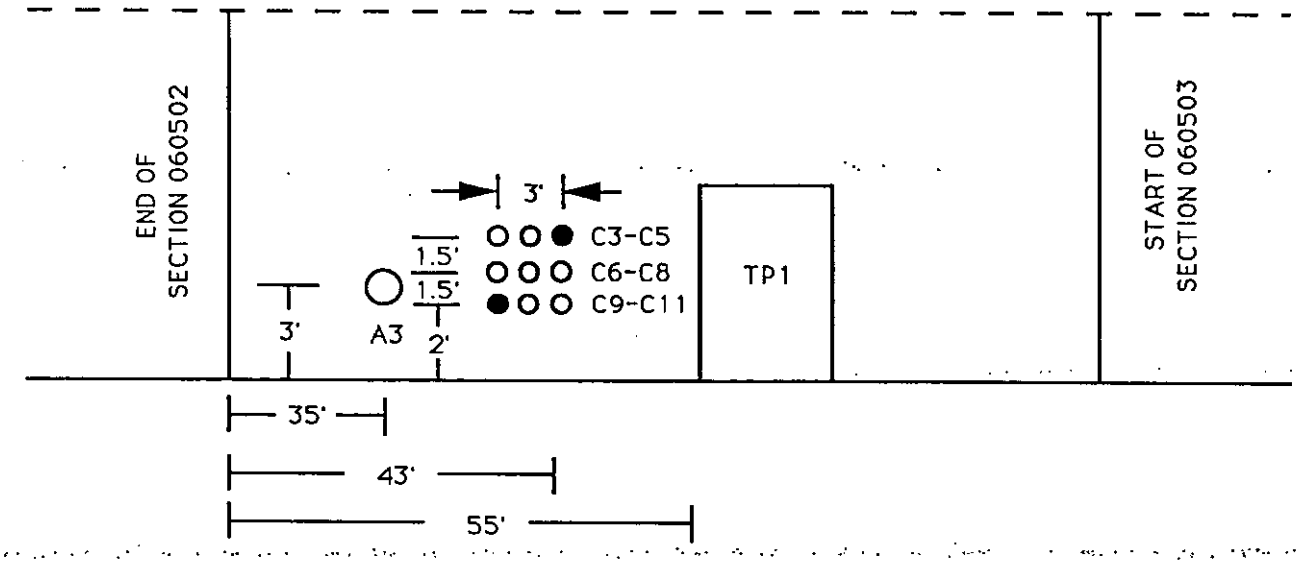
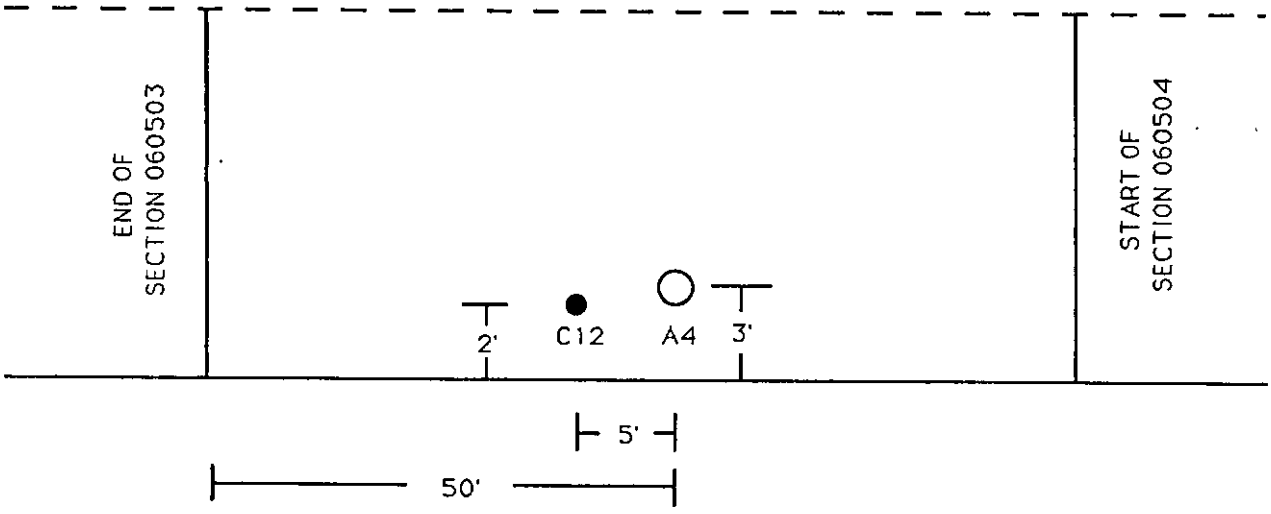


SAMPLE AREA S3



SAMPLE AREA S4

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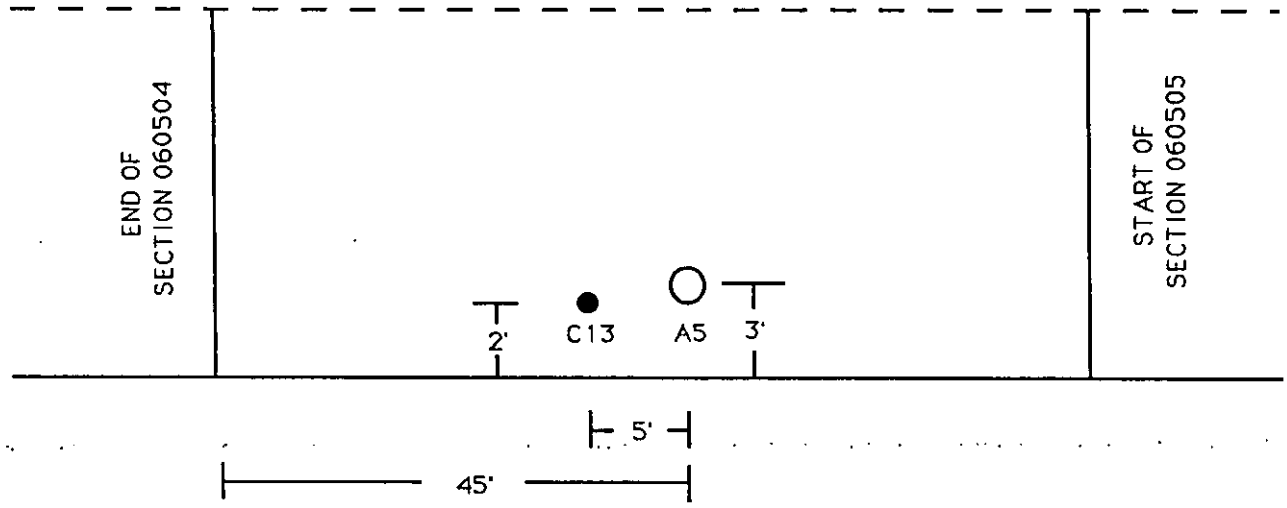
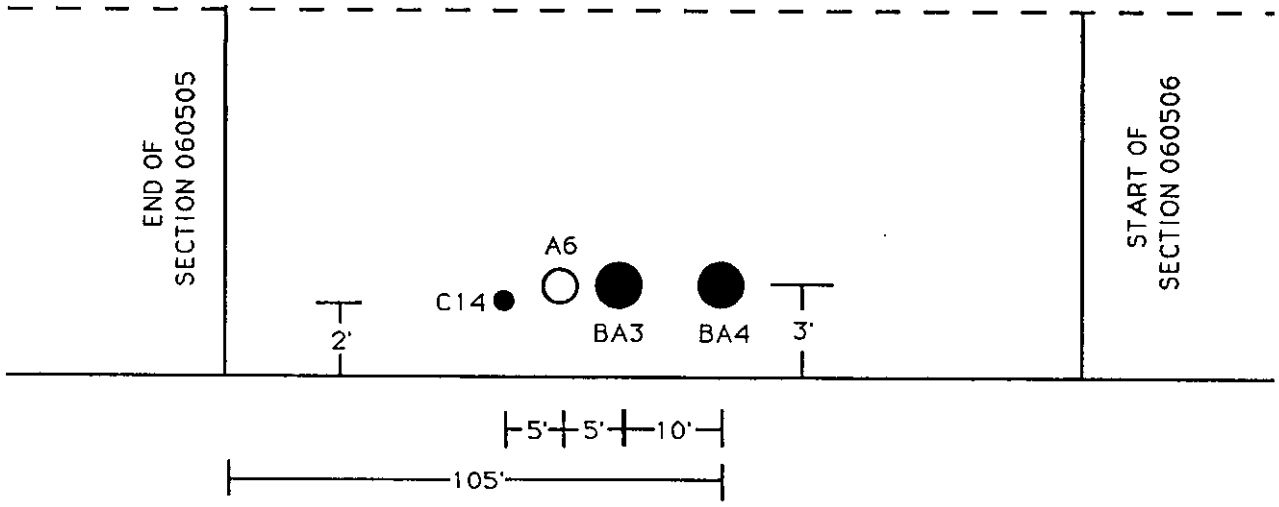
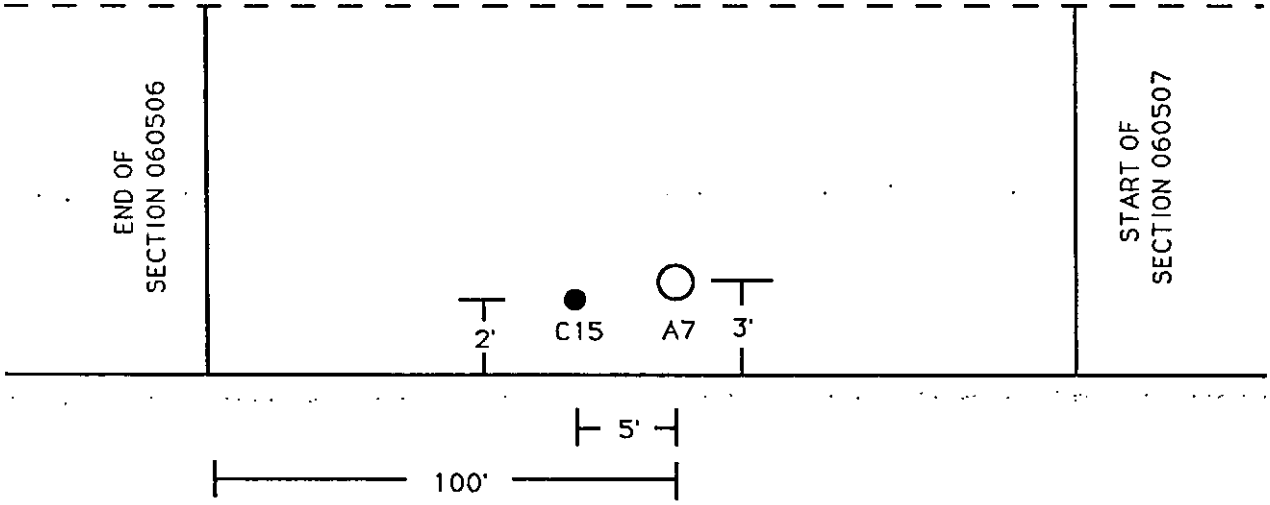


SAMPLE AREA S5

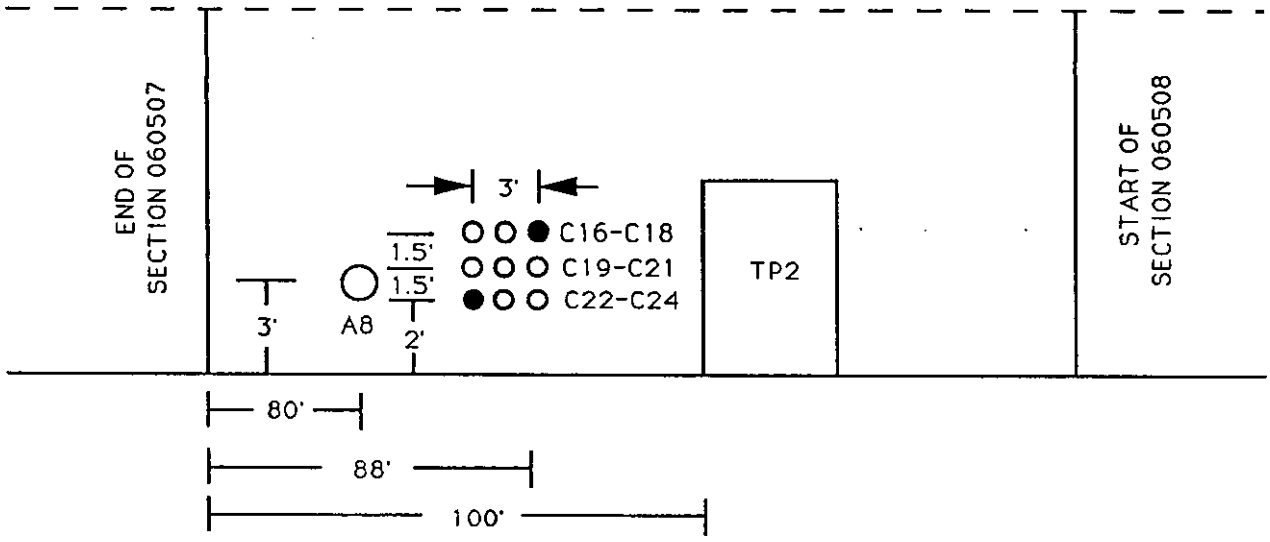


SAMPLE AREA S6

NOT TO SCALE

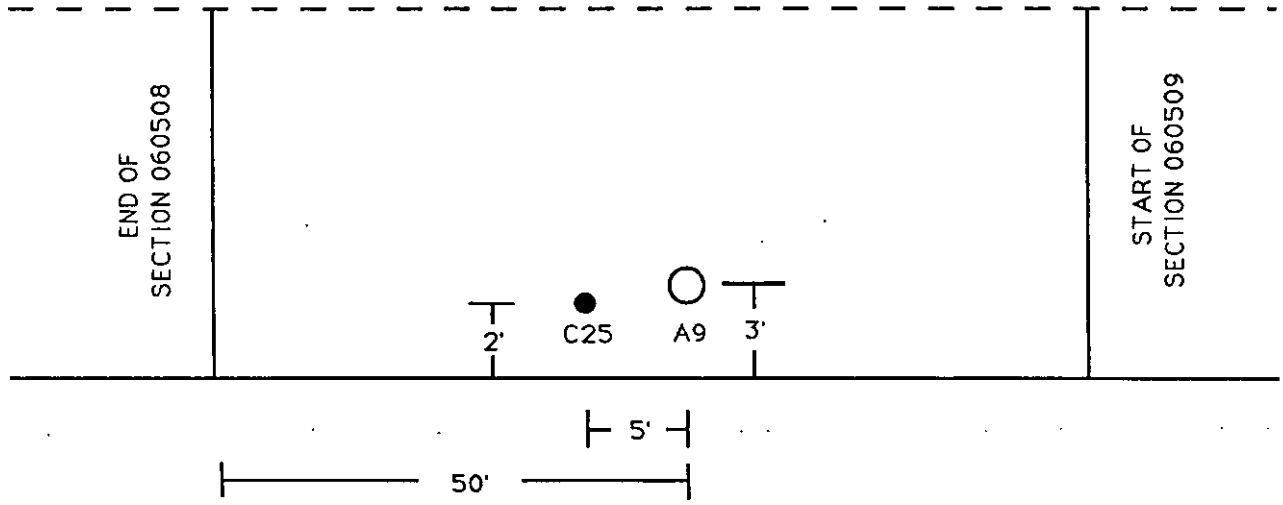


SAMPLE AREA S7

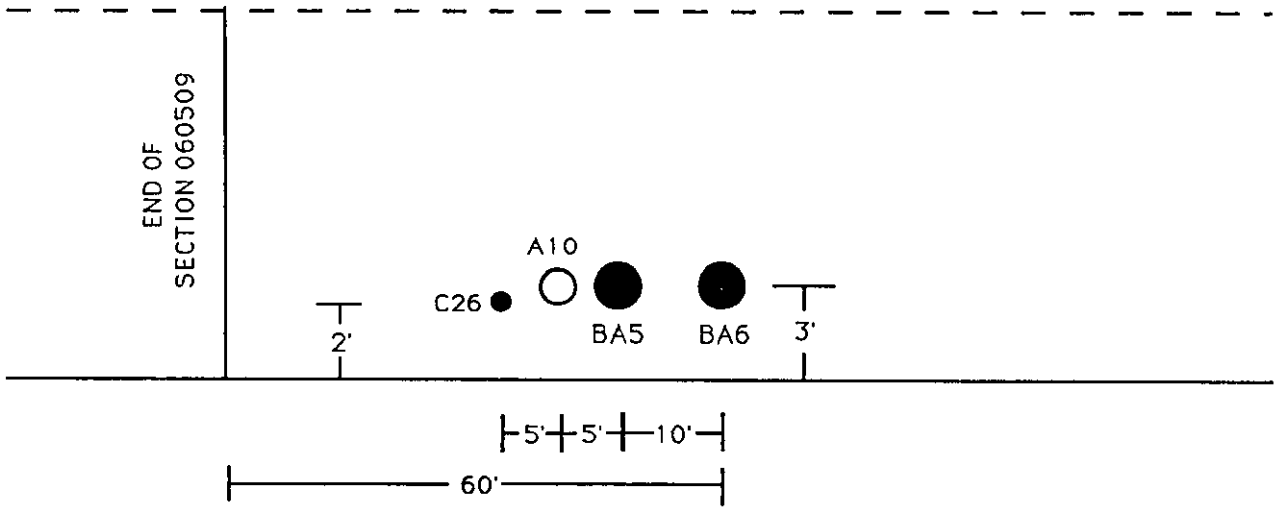


SAMPLE AREA S8

NOT TO SCALE



SAMPLE AREA S9



SAMPLE AREA S10